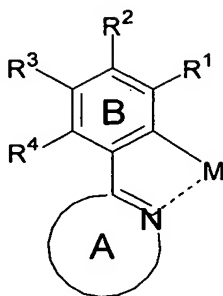


What is claimed is:

1. A metal-complex compound having a partial structure represented by a following general formula (I):

5



(I)

wherein Structure B represents a benzene ring structure having R¹ to R⁴; R¹ to R⁴ each independently represents a hydrogen atom, a cyano group, a halogen atom, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxy group having 1 to 20 carbon atoms, a substituted or unsubstituted aromatic group having 1 to 30 carbon atoms; at least one among R¹ to R⁴ is a cyano group; and a couple of R¹ and R², a couple of R² and R³, and a couple of R³ and R⁴ may bond each other to form a ring structure;

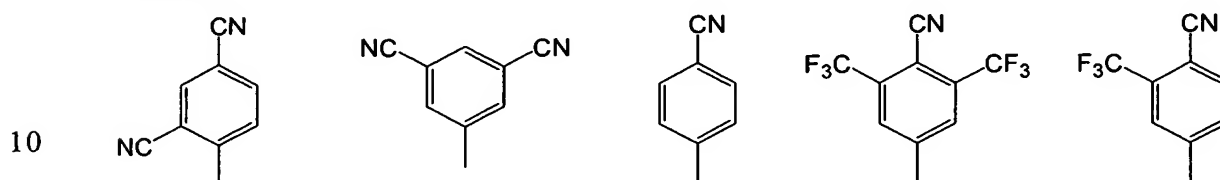
Structure A represents a ring structure having 3 to 20 carbon atoms, further having at least one carbon-nitrogen double bond and may have a substituent; which may form a ring structure having the foregoing R⁴; and

M represents any one metal atom selected from iridium (Ir) atom, rhodium (Rh) atom, platinum (Pt) atom or palladium (Pd) atom.

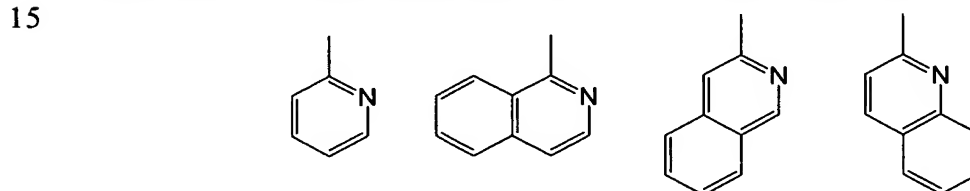
20

2. The metal-complex compound according to Claim 1, which is a material for a light emitting element.

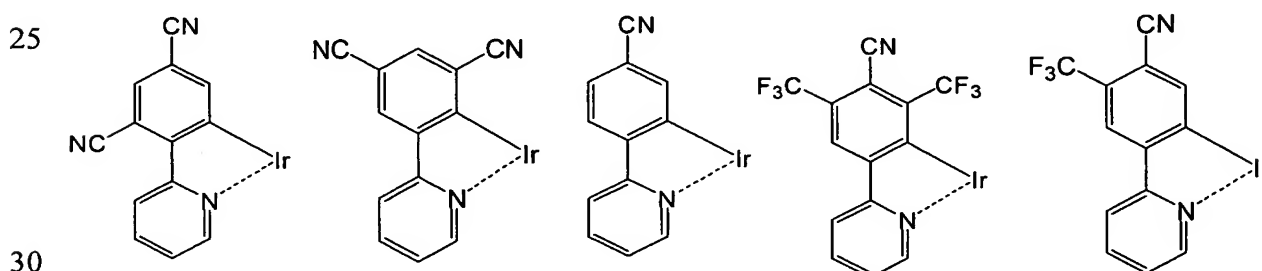
3. The metal-complex compound according to Claim 1, wherein said Structure B represents a substituted benzene ring moiety represented by any one of following formulae:



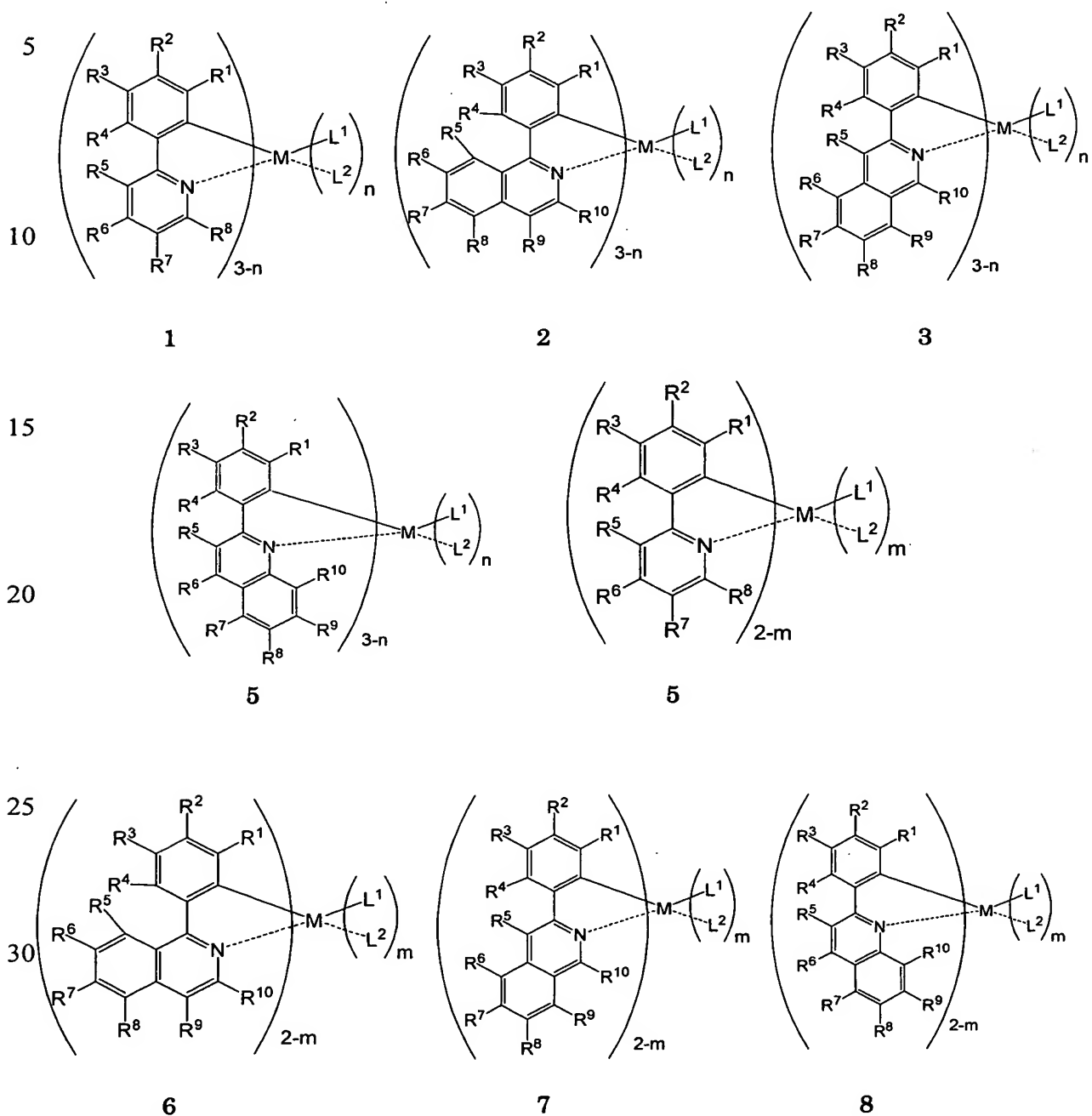
4. The metal-complex compound according to Claim 1, wherein said Structure A represents a group represented by any one of following formulae:



5. The metal-complex compound according to Claim 1, wherein said partial structure represented by the general formula (I) is expressed by any one of following formulae:



6. The metal-complex compound according to Claim 1, which is expressed by any one of following general formulae 1 to 8:



wherein R¹ to R¹⁰ each independently represents a hydrogen atom, a cyano group,

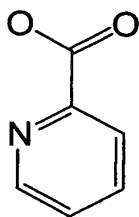
a halogen atom, a substituted or unsubstituted alkyl group having 1 to 20 carbon atoms, a substituted or unsubstituted amino group, a substituted or unsubstituted alkoxyl group having 1 to 20 carbon atoms, a substituted or unsubstituted aromatic group having 1 to 30 carbon atoms; at least one among

R¹ to R⁴ is a cyano group;

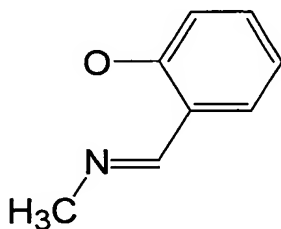
and a couple of R¹ and R², a couple of R² and R³, a couple of R³ and R⁴, a couple of R⁴ and R⁵, a couple of R⁵ and R⁶, a couple of R⁶ and R⁷, a couple of R⁸ and R⁹, and a couple of R⁹ and R¹⁰ may bond each other to form a ring structure;

M represents any one metal atom selected from iridium (Ir) atom, rhodium (Rh) atom, platinum (Pt) atom or palladium (Pd) atom; and

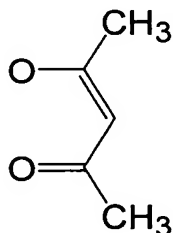
L¹ and L² each independently represents any one structure expressed by following structures:



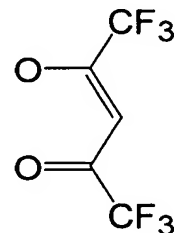
pic



sim



acac



facac

and

wherein n represents an integer of 0 to 2, and m represents an integer of 0 or 1.

7. An organic electroluminescence device which comprises at least one organic thin film layer sandwiched between a pair of electrode consisting of an anode and a cathode, wherein the organic thin film layer comprises the metal-complex compound according to any one of Claims 1 to 6, which emits light by applying an electric voltage between the pair of electrode.

8. The organic electroluminescence device according to Claim 7, wherein said light emitting layer comprises said metal-complex compound.

5 9. The organic electroluminescence device according to Claim 7, wherein at least one of an electron injecting layer or an electron transporting layer with a π -electron lacking heteroring derivative having a nitrogen atom as its essential component sandwiched between said light emitting layer and said cathode.

10 10. The organic electroluminescence device according to Claim 7, wherein a reductive dopant is added in an interfacial region between said cathode and said organic thin film layer.

11. The organic electroluminescence device according to Claim 7, wherein said
15 organic thin film layer comprising the metal-complex compound is formed by coating.